

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:)	
)	Confirmation No: 1268
Colin Andrew Low, et al.)	
)	Group Art Unit: 3714
Serial No.: 10/672,851)	
)	Examiner: Kang, Hu
Filed: September 26, 2003)	
)	
For: Two Mode Creature Simulation)	Atty. Docket No.: 30018433-3

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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P.O. Box 1450
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Sir:

This Appeal Brief under 37 C.F.R. § 41.37 is submitted in support of the Notice of Appeal filed October 26, 2009, responding to the Final Office Action mailed August 25, 2009.

It is not believed that extensions of time or fees are required to consider this Appeal Brief. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor are hereby authorized to be charged to Deposit Account No. 08-2025.

I. Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. Related Appeals and Interferences

There are no known related appeals or interferences that will affect or be affected by a decision in this Appeal.

III. Status of Claims

Claims 1 and 3-11 stand finally rejected. Claim 2 has been canceled. The final rejections of claims 1 and 3-11 are appealed.

IV. Status of Amendments

No claim amendments have been made subsequent to the Final Office Action mailed August 25, 2009. The claims in the attached Claims Appendix reflect the present state of Applicants' claims.

V. Summary of Claimed Subject Matter

The claimed inventions are summarized below with reference numerals and references to the written description ("specification") and drawings. The subject matter described in the following appears in the original disclosure at least where indicated, and may further appear in other places within the original disclosure.

Embodiments according to independent claim 1 describe a method of simulating the activities of a plurality of creatures. The method comprises simulating activities of the plurality of creatures at a first mode of simulation observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation. Applicants' specification, page 3, lines 8-16 and block 100 of Figure 1. The method further comprises simulating an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation. Applicants' specification, page 6, lines 4-15 and block 120 of Figure 1. The second mode of simulation is utilised in response to one or more of the plurality of creatures simulated by the first mode undergoing a change in environment, where the second mode is utilised to simulate the activity of the one or more of the plurality of creatures undergoing the change in environment. Applicants' specification, page 3, lines 18-23.

Embodiments according to independent claim 10 describe a recordable medium having recorded thereon computer readable code, wherein the computer readable code is adapted to simulate activities of a plurality of creatures at a first mode of simulation observable by a user. Applicants' specification, page 4, lines 22-23. The first mode of

simulation is less detailed and less computationally intensive than a second mode of simulation in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment. Applicants' specification, page 3, lines 8-16, page 3, lines 18-23, and block 100 of Figure 1. The code is further adapted to simulate an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment. Applicants' specification, page 6, lines 4-15 and block 120 of Figure 1.

Embodiments according to independent claim 11 describe a simulator device arranged to simulate activities of a plurality of creatures. Applicants' specification, page 4, lines 25-32. The device is arranged to utilise at least two modes of simulation. The two modes of simulation comprise a first mode of simulation arranged to simulate activities of the plurality of creatures observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation, Applicants' specification, page 3, lines 8-16 and block 100 of Figure 1; and a second mode of simulation arranged to simulate an activity of one of the plurality of creatures observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for a new change in environment. Applicants' specification, page 3, lines 18-23; page 6, lines 4-15; and block 120 of Figure 1.

VI. Grounds of Rejection to be Reviewed on Appeal

The following grounds of rejections are to be reviewed on appeal:

Claims 1, 3-9, and 11 have been rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter; and

Claims 1 and 3-11 have been rejected under 35 U.S.C. § 102(b) as being as allegedly being anticipated by *Starcraft* (Starcraft Game Manual by Blizzard).

VII. Arguments

A. Response to Rejection of Claims under 35 U.S.C. § 101

Claims 1-9 and 11 have been rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. The Final Office Action states that “Claims 1 and 11 as recited do not act upon a physical object so as to provide a transformation of that object into a different state or thing.” Page 2.

In response, Appellants point out that the Federal Circuit has stated that the proper test for patent-eligibility of processes is a machine-or-transformation test. Under the machine-or-transformation test, “[a] claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” *In re Bilski*, No. 2007-1130 (Fed. Cir. Oct. 30, 2008). *Bilski* further opines that “claim 1 does not involve the transformation of any physical object or substance, or an electronic signal representative of any physical object or substance” as support for its rejection of the claim at issue in the case.

Applicants' claim 1 recites "simulating activities of the plurality of creatures at a first mode of simulation observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation; and simulating an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation." Accordingly, the claim cites simulating activities of creatures at a first mode of simulation that is less computationally intensive than a second mode of simulation (which is at a higher level of computationally intensity). Such method steps are being performed by a computer (e.g., device performing the claimed computations). Therefore, in their broadest view, the method claims are tied to a computer. Further, Appellants point out that the Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). Appellants respectfully submit that the specification clearly supports a computer performing the simulation steps, among others, recited in the claims. Therefore, in light of the specification, the method claims should be interpreted as being tied to a particular machine. Accordingly, claims 1-9 are surely patent-eligible under § 101. Independent claim 11 satisfies the requirements of § 101 for at least similar reasons.

B. Response to Rejection of Claims under 35 U.S.C. § 102

Claims 1-11 have been rejected under 35 U.S.C. § 102(b) as being anticipated by *Starcraft* (Starcraft Game Manual by Blizzard). Appellants respectfully traverse this rejection.

1. Claim 1

As provided in independent claim 1, Applicants claim:

A method of simulating the activities of a plurality of creatures, the method comprising:

simulating activities of the plurality of creatures at a first mode of simulation observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation; and

simulating an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation,

wherein said second mode of simulation is utilised in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, the second mode being utilised to simulate the activity of said one or more of said plurality of creatures undergoing the change in environment.

(Emphasis added).

Appellants respectfully submit that independent claim 1 is allowable for at least the reason that *Starcraft* does not disclose, teach, or suggest at least “simulating an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation, wherein said second mode of simulation is utilised in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment,

the second mode being utilised to simulate the activity of said one or more of said plurality of creatures undergoing the change in environment,” as emphasized above.

In *Starcraft*, a computer game utilizes a mini-map providing an overview of a location of space vehicle in relation to its distant surroundings, where a main display segment shows the space vehicle in relation to its immediate surroundings. The main display segment is alleged by the Examiner to be shown in higher detail than the mini-map display. As such, *Starcraft* fails to use results from one mode of simulation to provide a simulation in another mode, since both simulations run concurrently. Likewise, *Starcraft* does not disclose the main display being utilized in response to a change in environment occurring in the mini-map, since both the main display and the mini-map are displayed concurrently regardless if a change in environment is occurring in the mini-map display. Further, *Starcraft* shows a simulation of an object at a lower resolution in a distant view before the object is shown at a higher simulation in the main display segment. Therefore, even if results of one simulation depended on the other, in *Starcraft*, a result from a high-detailed simulation would not be used to produce a lower-detailed simulation.

In the Final Office Action, the Examiner asserts that it is possible to have concurrently running simulations. Page 9. In response, Appellants agree that the mini-map and the main display are concurrently displayed at any given time regardless of environment changes. As such, *Starcraft* does not disclose, teach, or suggest at least “simulating an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first

mode of simulation, wherein said second mode of simulation is utilised in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, the second mode being utilised to simulate the activity of said one or more of said plurality of creatures undergoing the change in environment,” as recited in claim 1.

The Examiner further asserts that Applicant has previously stated “both simulations run concurrently.” See page 9 of Final Office Action. Appellants would like to clarify that Applicants previously stated that simulations for the main display and mini-map are run concurrently and therefore, one is not used to simulate the other. See page 7 of Response filed May 6, 2009. As such, *Starcraft* does not disclose, teach, or suggest at least “simulating an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation, wherein said second mode of simulation is utilised in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, the second mode being utilised to simulate the activity of said one or more of said plurality of creatures undergoing the change in environment,” as recited in claim 1.

The Examiner also states that “[i]f the two simulations run concurrently, the lower resolution distant view would not be shown before the object is shown at a higher resolution.” See page 9 of Final Office Action. Based on this reasoning, Appellants submit that a higher resolution distant view would not be shown before the object is shown at a lower resolution. Accordingly, each of these displays are seemingly based

on the same mode of computational intensity. As such, *Starcraft* does not disclose, teach, or suggest at least "simulating an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation, wherein said second mode of simulation is utilised in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, the second mode being utilised to simulate the activity of said one or more of said plurality of creatures undergoing the change in environment," wherein "the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation," as recited in claim 1.

Therefore, claim 1 is patentable over the cited art, and the rejection should be overturned.

2. Claims 3-9

Dependent claims 3-9 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that the dependent claims 2-9 contain all the features of allowable independent claim 1. For at least this reason, the rejection of claims 3-9 should be overturned.

Additionally and notwithstanding the foregoing reasons for allowability of claims 3-9, these claims recite further features and/or combinations of features (as is apparent by examination of the claims themselves) that are patentably distinct from the cited art of record. Accordingly, the rejections to these claims should be overturned.

3. Claim 10

As provided in independent claim 10, Applicants claim:

A recordable medium having recorded thereon computer readable code, wherein the computer readable code is adapted to:

simulate activities of the plurality of creatures at a first mode of simulation observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation; and

simulate an activity of one of the plurality of creatures at the second mode of simulation observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment.

(Emphasis added).

Appellants respectfully submit that independent claim 10 is allowable for at least the reason that *Starcraft* does not disclose, teach, or suggest at least to "simulate an activity of one of the plurality of creatures at the second mode of simulation observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment," as emphasized above.

In *Starcraft*, a computer game utilizes a mini-map providing an overview of a location of space vehicle in relation to its distant surroundings, where a main display segment shows the space vehicle in relation to its immediate surroundings. The main display segment is allegedly shown in higher detail than the mini-map display. As such, *Starcraft* fails to use results from one mode of simulation to provide a simulation in

another mode, since both simulations run concurrently. Likewise, *Starcraft* does not disclose the main display being utilized in response to a change in environment occurring in the mini-map, since both the main display and the mini-map are displayed concurrently regardless if a change in environment is occurring in the mini-map display. Further, *Starcraft* shows a simulation of an object at a lower resolution in a distant view before the object is shown at a higher simulation in the main display segment. Therefore, even if results of one simulation depended on the other, in *Starcraft*, a result from a high-detailed simulation would not be used to produce a lower-detailed simulation.

For at least these reasons, the cited art fails to teach or suggest to “simulate an activity of one of the plurality of creatures at the second mode of simulation observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment,” as recited in claim 10.

Therefore, claim 10 is patentable over the cited art, and the rejection should be overturned.

4. Claim 11

As provided in independent claim 11, Applicants claim:

A simulator device arranged to simulate the activities of a plurality of creatures, the device being arranged to utilise at least two modes of simulation: a first mode arranged to:

simulate activities of the plurality of creatures at a first mode of simulation observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation; and

the second mode of simulation arranged to simulate an activity of one of the plurality of creatures observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment.

(Emphasis added).

Appellants respectfully submit that independent claim 11 is allowable for at least the reason that *Starcraft* does not disclose, teach, or suggest at least “the second mode of simulation arranged to simulate an activity of one of the plurality of creatures observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment,” as emphasized above.

In *Starcraft*, a computer game utilizes a mini-map providing an overview of a location of space vehicle in relation to its distant surroundings, where a main display segment shows the space vehicle in relation to its immediate surroundings. The main display segment is allegedly shown in higher detail than the mini-map display. As such, *Starcraft* fails to use results from one mode of simulation to provide a simulation in

another mode, since both simulations run concurrently. Likewise, *Starcraft* does not disclose the main display being utilized in response to a change in environment occurring in the mini-map, since both the main display and the mini-map are displayed concurrently regardless if a change in environment is occurring in the mini-map display. Further, *Starcraft* shows a simulation of an object at a lower resolution in a distant view before the object is shown at a higher simulation in the main display segment. Therefore, even if results of one simulation depended on the other, in *Starcraft*, a result from a high-detailed simulation would not be used to produce a lower-detailed simulation.

For at least these reasons, the cited art fails to teach or suggest "the second mode of simulation arranged to simulate an activity of one of the plurality of creatures observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment," as recited in claim 11.

Therefore, claim 11 is patentable over the cited art, and the rejection should be overturned.

III. Conclusion

In summary, it is Appellants' position that Applicants' claims are patentable over the applied cited art references and that the rejection of these claims should be overturned. Appellants therefore respectfully request that the Board of Appeals overturn the Examiner's rejection and allow Applicants' pending claims.

Respectfully submitted,

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Claims Appendix under 37 C.F.R. § 41.37(c)(1)(viii)

The following are the claims that are involved in this Appeal.

1. A method of simulating the activities of a plurality of creatures, the method comprising:

simulating activities of the plurality of creatures at a first mode of simulation observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation; and

simulating an activity of one of the plurality of creatures at the second mode of simulation observable by the user, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation,

wherein said second mode of simulation is utilised in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, the second mode being utilised to simulate the activity of said one or more of said plurality of creatures undergoing the change in environment.

2. Canceled

3. A method as claimed in claim 1, wherein said change in environment comprises a creature undergoing at least one of: fighting; mating; eating; interacting with another creature; reproducing; sensing another creature; encountering another creature; moving to a new terrain type; and altering the environment.

4. A method as claimed in claim 1, wherein the second mode is invoked at the start of the simulation so as to determine starting parameters of each creature.

5. A method as claimed in claim 1, wherein said second mode is utilised to determine at least one parameter affecting the activity of the simulated creature, said parameter being subsequently utilised by the first mode of simulation.

6. A method as claimed in claim 1, wherein when the method changes from utilising the second mode to the first mode, at least one parameter relating to said creature simulated by the second mode is stored for use by a later iteration of the second mode.

7. A method as claimed in claim 4, wherein said parameter comprises at least one of creature mass; creature energy; creature strength; creature behaviour transition probabilities; creature biochemical levels; creature movement parameters; creature speed; and creature rate of turn.

8. A method as claimed in claim 5, wherein said parameter comprises at least one of creature mass; creature energy; creature strength; creature behaviour transition probabilities; creature biochemical levels; creature movement parameters; creature speed; and creature rate of turn.

9. A method as claimed in claim 6, wherein said parameter comprises at least one of creature mass; creature energy; creature strength; creature behaviour transition probabilities; creature biochemical levels; creature movement parameters; creature speed; and creature rate of turn.

10. A recordable medium having recorded thereon computer readable code, wherein the computer readable code is adapted to:

simulate activities of a plurality of creatures at a first mode of simulation observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation; and

simulate an activity of one of the plurality of creatures at the second mode of simulation observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results of the simulation at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment.

11. A simulator device arranged to simulate activities of a plurality of creatures, the device being arranged to utilise at least two modes of simulation, the two modes of simulation comprising:

a first mode of simulation arranged to simulate activities of the plurality of creatures observable by a user, wherein the first mode of simulation is less detailed and less computationally intensive than a second mode of simulation; and

the second mode of simulation arranged to simulate an activity of one of the plurality of creatures observable by the user in response to one or more of said plurality of creatures simulated by said first mode undergoing a change in environment, wherein results at the second mode of simulation are used to provide a simulation of the plurality of creatures at the first mode of simulation for the new change in environment.

Evidence Appendix under 37 C.F.R. § 41.37(c)(1)(ix)

There is no extrinsic evidence to be considered in this Appeal. Therefore, no evidence is presented in this Appendix.

Related Proceedings Appendix under 37 C.F.R. § 41.37(c)(1)(x)

There are no related proceedings to be considered in this Appeal. Therefore, no such proceedings are identified in this Appendix.